

Translation

## PATENT COOPERATION TREATY PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|  |   |   |
|--|---|---|
| Applicant's or agent's file reference<br><b>PAT 01084PCT</b>                 | FOR FURTHER ACTION  | See Form PCT/IPEA/416                               |
| International application No.<br><b>PCT/EP2004/002475</b>                    | International filing date (day/month/year)<br><b>11.03.2004</b> | Priority date (day/month/year)<br><b>12.04.2003</b> |
| International Patent Classification (IPC) or national classification and IPC |   |   |
| Applicant<br><b>BASF COATINGS AG</b>   |   |   |

|   |
|---|
| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.  |
| 2. This REPORT consists of a total of <b>8</b> sheets, including this cover sheet.  |
| 3. This report is also accompanied by ANNEXES, comprising:  |
| a. <input type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of _____ sheets, as follows:<br><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or<br><input type="checkbox"/> sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).<br><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.<br>b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s))<br>_____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. This report contains indications relating to the following items:  |
| <input checked="" type="checkbox"/> Box No. I Basis of the report<br><input type="checkbox"/> Box No. II Priority<br><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability<br><input type="checkbox"/> Box No. IV Lack of unity of invention<br><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement<br><input checked="" type="checkbox"/> Box No. VI Certain documents cited<br><input type="checkbox"/> Box No. VII Certain defects in the international application<br><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application  |

|   |                                   |
|---|-----------------------------------|
| Date of submission of the demand        | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer                |
| Facsimile No.                           | Telephone No.                     |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/002475

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item:

- This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- the international application as originally filed/furnished  
 the description:

pages 1-55 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\*\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the claims:

nos. 1-24 as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\*\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

nos.\*\*\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the drawings:

sheets \_\_\_\_\_ as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\*\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_
- the claims, nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (specify): \_\_\_\_\_
- any table(s) related to sequence listing (specify): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_
- the claims, nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (specify): \_\_\_\_\_
- any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/002475

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |        |      |
|-------------------------------|--------|------|
| Novelty (N)                   | Claims | YES  |
|                               | Claims | 1-24 |
| Inventive step (IS)           | Claims | YES  |
|                               | Claims | 1-24 |
| Industrial applicability (IA) | Claims | YES  |
|                               | Claims | 1-24 |

**2. Citations and explanations (Rule 70.7)****1. Reference is made to the following documents:**

- D1: EP-A-0 952 170 (BAYER AG) 27 October 1999  
       (1999-10-27)
- D2: EP-A-0 393 007 (MONSANTO CO) 17 October 1990  
       (1990-10-17)
- D3: DE 198 53 813 A (HENKEL KGAA) 17 June 1999  
       (1999-06-17)
- D4: EP-A-0 632 329 (CIBA GEIGY AG) 4 January 1995  
       (1995-01-04)
- D5: EP-A-0 287 736 (GORE & ASS) 26 October 1988  
       (1988-10-26)

2. Examples 3-5 of document D1 disclose a mixture containing a photoinitiator (Irgacure® 184 or 185) and a urethane acrylate with an NCO content of 11.5%. The mixture is used as a cross-linking agent in a two-component system. The binding agent component contains actinically activatable groups such as C=O- or C-O- groups.

Document D1 thus prejudices the novelty of the subject matter of claims 1-24 of the present

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Box No. V

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

application.

3. Example 9 of document D2 discloses a dual-curable composition that contains a component A containing methylene bis (4-cyclohexylisocyanate) (Desmodur W®) and the photoinitiator and a component B containing a polytetramethylene ether glycol (Terathane®) and compounds with acrylate groups.

Document D2 thus prejudices the novelty of the subject matter of claims 1-24 of the present application.

4. Example 1 of document D3 discloses a mixture that contains an NCO-terminated prepolymer with acrylate groups and a photoinitiator (Irgacure® 651).

Document D3 thus prejudices the novelty of the subject matter of claims 1-12 of the present application.

5. Examples A5, A6 and A9 of document D4 disclose a mixture that contains Irgacure® 184 and a diisocyanate.

Document D4 thus prejudices the novelty of the subject matter of claims 1-12 of the present application.

6. Example 1 of document D5 discloses a moisture- and radically cured mixture that contains an NCO-

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**Box No. V****Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

terminated prepolymer with acrylate groups and a photoinitiator (Irgacure® 500).

Document D5 thus prejudices the novelty of the subject matter of claims 1-12 of the present application.

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| <b>Box No. VI Certain documents cited</b>          |  |   |   |
|--|--|---|---|
| <b>1. Certain published documents (Rule 70.10)</b> |  |   |   |
| Application No.<br>Patent No.                      | Publication date<br>(day/month/year)               | Filing date<br>(day/month/year)   | Priority date (valid claim)<br>(day/month/year) |
| EP1347003  | 24.09.2003   | 18.03.2002  |   |
| <b>2. Non-written disclosures (Rule 70.9)</b>      |  |   |   |
| Kind of non-written disclosure                     | Date of non-written disclosure<br>(day/month/year) | Date of written disclosure<br>referring to non-written disclosure<br>(day/month/year) |   |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. The subject matter of claim 1 is unclear (PCT Article 6), since the phrase "the majority" is not clear.

The applicant could overcome this objection by replacing this phrase with a percentage (50, 60, 70) taken from page 35, lines 26-30 of the description.

Claims 14 and 19 are unclear for the same reason (PCT Article 6).

- 2a. The subject matter of claim 1 is unclear (PCT Article 6), since isocyanate groups are also isocyanate-reactive functional groups (e.g. isocyanurate formation) and therefore the mixture is not free from isocyanate-reactive functional groups.

The applicant could incorporate claim 11 into claim 1 in order to overcome this objection.

- 2b. According to page 10, lines 26-30 of the description, component (II) and the claimed mixture is an aqueous, organic dispersion. Since water contains isocyanate-reactive functional groups, the subject matter of claim 1 is unclear (PCT Article 6).

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## Box No. VIII Certain observations on the International application

Claims 14 and 19 are unclear for the same reasons (PCT Article 6).

3. The subject matter of claim 14 is unclear (PCT Article 6), since the term "prevailing amount" is unclear.

The applicant could overcome this objection by replacing the term with the information provided on page 13, line 25 (more than 50 wt.%).

Claim 19 is unclear for the same reason (PCT Article 6).

4. The subject matter of claims 1, 13, 14, 19 and 21 is unclear (PCT Article 6), since the examples are not covered by the claims. The cross-linking agent component II contains Irgacure® 184 (1-hydroxycyclohexyl-phenyl-ketone). This component is therefore not free from isocyanate-reactive functional groups.